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(54) Bar code reader for reading both one dimensional and two dimensional symbologies with programmable resolution

(57) A plurality of the areas of differing light reflectivity of a bar code symbol (34) or the like are simultaneously illuminated using, for example, a beam of laser light (22) that has an elongate cross-section. The light beam (22) is swept over the symbol to be read in a direction transverse to the elongated dimension of the illuminated region (78) so that a two-dimensional area (42) of the symbol is illuminated over time. The reflected light is sensed by a 1D CCD array (50). A microprocessor (52) is

within the scanner provides visual feedback to aid a user in aligning the device, and also provides for a selectable aspect ratio for the image, a selectable image resolution and size, a selectable aspect ratio of the illumination, and a selectable pixel size. All of these options may be programmed within the microprocessor (52), enabling the device to read a large variety of two-dimensional symbols.

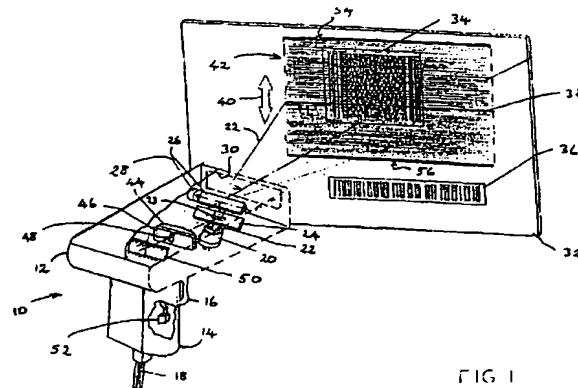


FIG. 1

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DOCUMENTS CONSIDERED TO BE RELEVANT					
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)		
X	WO-A-93 18478 (NORAND CORPORATION) * page 5, line 6 - page 6, line 25; figure 4 *	1,3,10	G06K7/10		
Y	---	8			
Y	US-A-5 117 098 (J. SWARTZ) * column 3, line 14 - line 16; claim 1 *	8			
A	---	1,9,10			
X	EP-A-0 384 955 (SYMBOL TECHNOLOGIES, INC.) * column 5, line 31 - line 54 * * column 7, line 21 - line 24; claims 1,10; figure 1 *	1,10			
A	---	1,10			
A	US-A-4 963 756 (R. QUAN ET AL.) * column 3, line 24 - line 43; figure 1 *	4,5			
A	EP-A-0 576 220 (MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD) * column 3, line 2 - line 11; figure 1 *	8,9			
A	ID SYSTEMS EUROPEAN EDITION, vol. 1, no. 1, March 1993, PETERBOROUGH, NH, US, pages 16-18, XP000443107 KEVIN R. SHARP: "2-d bar codes change businesses" * page 17 *	-----	TECHNICAL FIELDS SEARCHED (Int.Cl.6) G06K		
The present search report has been drawn up for all claims					
Place of search	Date of completion of the search	Examiner			
BERLIN	22 April 1996	Ducreau, F			
CATEGORY OF CITED DOCUMENTS					
X : particularly relevant if taken alone	T : theory or principle underlying the invention				
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